

SEQUENCE LISTING

<110> Cahoon, Rebecca E..
Fang, Yiwen
Odell, Joan
Weng, Zude

<120> Plant Myb Transcription Factor Homologs

<130> BB1294 US NA

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<150> 60/110,609
<151> 1998-December-02

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caacaagaag aacagcaagg agccaagacg acgcaacaac gggaccgtcn acgaccgcca 480
actccnnggc ccggggacga ctactgggtg cacaacccga ccccgacaac aagccatact 540
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ccccttcggg gnctnacaac cagaaanccc cnccggcggg gaatggtaat cacaacanaa 660
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Val	Ser	Tyr	Ile	Ser	Gln	His	Gly	Glu	Gly	Ser	Trp	Asp	Asn	Leu	Ala
	35						40					45			
Arg	Ala	Ala	Gly	Leu	Asn	Arg	Asn	Gly	Lys	Ser	Cys	Arg	Leu	Arg	Trp
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Glu	Asp	Thr	Val	Ile	Arg	Glu	Leu	His	Ala	Arg	Trp	Gly	Asn	Lys	Trp
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Ser	Lys	Ile	Ser	Lys	His	Leu	Pro	Gly	Arg	Thr	Asp	Asn	Glu	Xaa	Lys
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atcaagaact	actggaggac	acacatgagg	aagaaagcac	aggagaggaa	gaggaacatg	600
tctccatcat	catcctcatc	ttcactgagt	taccagtcag	gctacccaga	tactccatca	660

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<213> Zea mays

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Trp Asp Phe Ile Ala Lys Val Ser Gly Leu Asn Arg Thr Gly Lys Ser
35 40 45
Cys Arg Leu Arg Trp Val Asn Tyr Leu His Pro Gly Leu Lys Arg Gly
50 55 60
Arg Met Ser Pro His Glu Glu Arg Leu Ile Leu Glu Leu His Ala Arg
65 70 75 80
Trp Gly Asn Arg Trp Ser Arg Ile Ala Arg Arg Leu Pro Gly Arg Thr
85 90 95
Asp Asn Glu Ile Lys Asn Tyr Trp Arg Thr His Met Arg Lys Lys Ala
100 105 110
Gln Glu Arg Lys Arg Asn Met Ser Pro Ser Ser Ser Ser Ser Ser Leu
115 120 125
Ser Tyr Gln Ser Gly Tyr Pro Asp Thr Pro Ser Ile Ile Gly Val Lys
130 135 140
Gly Gln Glu Leu His Gly Gly Ser Gly Cys Ile Thr Ser Ile Leu Lys
145 150 155 160
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165 170 175
Glu Leu Lys

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ggcgcgtgac caccgagagc tgagcggcga cgaggactcc gtggtggcgg ccggagacct 180

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caccagcan ctcaatgcaa ctcaaagcan cgctcaagga ctacgcgcta atctggatgc 540
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      20             25             30

Met Leu Leu Val Asn Tyr Val Ala Ala His Gly Glu Gly Arg Trp Asn
      35             40             45

Ala Leu Ala Arg Cys Ala Gly Leu Arg Arg Thr Gly Lys Ser Cys Arg
      50             55             60

Leu Arg Trp Leu Asn Tyr Leu Arg Pro Asp Leu Arg Arg Gly Asn Ile
      65             70             75             80

Thr Ala Gln Glu Gln Leu Leu Ile Leu Glu Leu His Ser Arg Trp Gly
      85             90             95

Asn Arg Trp Ser Xaa Ile Ala Gln His Leu Gln Gly Gln Arg Gln Arg
      100            105            110

Xaa Xaa Asn Tyr Trp Arg Thr Gly
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 20 25 30
 Ala Ala Gly Leu Lys Arg Thr Gly Lys Xaa Cys Arg Leu Arg Trp Xaa
 35 40 45
 Asn Tyr Leu Arg Pro Asp Val Lys Arg Gly Asn Phe Ser Ala Asp Glu
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<210> 9
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<213> Zea mays

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His His Ser His Gln Leu Lys Gly Gly Ala Gln Glu Glu Ala Glu Asn
 35          40          45

Asp Asn Asn Lys Pro Glu Leu Arg Arg Gly Pro Trp Thr Val Asp Glu
 50          55          60

Asp Leu Thr Leu Val Asn Tyr Ile Ala Asp Asn Gly Glu Gly Arg Trp
 65          70          75          80

Asn Asn Leu Ala Arg Ala Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys
 85          90          95

Arg Leu Arg Trp Leu Asn Tyr Leu Arg Pro Asp Val Lys Arg Gly Asn
100          105          110

Phe Ser Ala Asp Glu Gln Leu Leu Ile Leu Asp Leu His Thr Arg Trp
115          120          125

Gly Asn Arg Trp Ser Lys Ile Ala Gln His Leu Pro Gly Arg Thr Asp
130          135          140

Asn Glu Ile Lys Asn Tyr Trp Arg Thr Arg Val Gln Lys His Ala Lys
145          150          155          160

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Gln Leu Asn Cys Asp Ala Asn Ser Lys Arg Phe Lys Asp Ala Met Arg
 165 170 175
 Tyr Leu Trp Met Pro His Leu Ala Asp Asp Val Asp Thr Ile Ala Ala
 180 185 190
 Ala Asn Asp Asp Asp Glu Asp His His His Asn Leu Arg Leu Leu Val
 195 200 205
 Leu His His His Gln Ala Gln His Leu Gln Gln Ala Ala Ala Ala Ala
 210 215 220
 Gly Gly Ala Ala Asn Asp Leu Ala Ala Gly Ala Tyr Asp Val Arg Gln
 225 230 235 240
 Leu His Ala Leu Pro Ser Ser Gly Met Ala Ala Thr Ser Ser Ser Asp
 245 250 255
 Ser Leu Ala Ser Glu Ser Tyr Asp Asp Gly Gly Leu Leu Phe Ala Asn
 260 265 270
 Leu Arg Ala Gly Glu Met Leu Met Asp Gly Gly Asp Trp Ala Ala Gln
 275 280 285
 Gln Glu Ala Asp Gln Gly Leu Trp Pro Pro Pro Pro Pro Pro Ser
 290 295 300
 Asp Leu Asp Gln Ser Val Val Gln Ala Ala Gly Ala Gly Ala Gly Gln
 305 310 315 320
 Phe Gln Asp Met Glu Leu Ser Gly Trp Val Gln Gly Phe Ser Glu Ser
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 Ile Thr Asp Asn Phe Trp Ala Leu Glu Glu Ile Trp Lys Met Gln
 340 345 350

<210> 11
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 <212> DNA
 <213> *Oryza sativa*

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 <212> PRT
 <213> *Oryza sativa*

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Ser Cys Arg Leu Arg Trp Val Asn Tyr Leu His Pro Gly Leu Lys Arg
 20 30

Gly Arg Met Ser Pro Glu Glu Glu Arg Met Val Val Gln Leu His Ala
 35 40 45

Lys Leu Gly Asn Arg Trp Ser Arg Ile Ala Lys Ser Ile Pro Gly Arg
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Thr Asp Asn Glu Ile Lys Asn
 65 70

<210> 13
 <211> 1123
 <212> DNA
 <213> Oryza sativa

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 <212> PRT
 <213> Oryza sativa

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 35 40 45
 Tyr Leu His Pro Gly Leu Lys Arg Gly Arg Met Ser Pro Glu Glu Glu
 50 55 60
 Arg Met Val Val Gln Leu His Ala Lys Leu Gly Asn Arg Trp Ser Arg
 65 70 75 80

Trp Asp Phe Val Ala Lys Val Ser Gly Leu Arg Gly Leu Asn Arg Thr
 35 40 45

Gly Lys Ser Cys Arg Leu Arg Trp Val Asn Xaa Leu Gln Pro
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<210> 17
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 <213> Oryza sativa

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 gctgaagcgg acggggaaga gctgccggct gcggtggctg aactacctga ggccggacgt 240
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<210> 18
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 <213> Oryza sativa

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Val Asn Tyr Ile Ala Ala His Gly Glu Gly Arg Trp Asn Ala Leu Ala
 35 40 45

Arg Cys Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp
 50 55 60

Leu Asn Tyr Leu Arg Pro Asp Val Arg Arg Gly Asn Met Thr Ala Glu
 65 70 75 80

Glu Gln Leu Leu Ile Leu Glu Leu His Gly Arg Trp Gly Asn Arg Trp
 85 90 95

Ser Lys Ile Ala Gln His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys
100 105 110

Asn Tyr Trp Arg Thr Arg Val Gln Lys His Ala Lys His Leu Asn Cys
115 120 125

Asp Val Asn Ser Gln Gln Phe Lys Asp Leu Met Arg Tyr Leu Trp Met
130 135 140

Pro
145

<210> 19
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<212> DNA
<213> Oryza sativa

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tcccgatggg gcaaccgatg gtccaagata gcacaacatt tgcctgggag gaccgacgac 180
gagatcaaga actactggag gaccagagtg caaaagcatg ccaagcaact caattgtgat 240
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cgcatccatg ccagggtctg cgctgttgat gatagcggag actacagcaa caacgactta 360
tcatgtgtat ctggtgtaac aatggccact gttgctaatt gttttgatgg ctctccgagc 420
atggtgacta gctcatcctc 440

<210> 20
<211> 146
<212> PRT
<213> Oryza sativa

<400> 20

Ala Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu
1 5 10 15

Asn Tyr Leu Arg Pro Asp Val Lys Arg Gly Asn Phe Thr Ala Glu Glu
20 25 30

Gln Leu Leu Ile Leu Asp Leu His Ser Arg Trp Gly Asn Arg Trp Ser
35 40 45

Lys Ile Ala Gln His Leu Pro Gly Arg Thr Asp Asp Glu Ile Lys Asn
50 55 60

Tyr Trp Arg Thr Arg Val Gln Lys His Ala Lys Gln Leu Asn Cys Asp
65 70 75 80

Val Asn Ser Lys Arg Phe Lys Asp Ala Met Lys Tyr Leu Trp Met Pro
85 90 95

Arg Leu Ala Glu Arg Ile His Ala Arg Ala Gly Ala Val Asp Asp Ser
100 105 110

Gly Asp Tyr Ser Asn Asn Asp Leu Ser Cys Val Ser Gly Val Thr Met
115 120 125

Ala Thr Val Ala Asn Cys Phe Asp Gly Ser Pro Ser Met Val Thr Ser
130 135 140

Ser Ser
145

<210> 21
<211> 640
<212> DNA
<213> Oryza sativa

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<400> 21
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tctatccgat caatcgactg gcccgcgagg atcgatcgag actcgaaagg gagggatttt 180
gatccggatc ggtcgacgat ggacatggcg cacgagaggg acgcgagcag cgaggaggag 240
gtgatgggcg gcgacctgog tcgcggggccg tggacgggtg aggaggacct cctgctcgtc 300
aactacatcg ccgcgcacgg cgagggccgc tggaaactcg tcgcccgatc agcanggctg 360
aaacgcacag gcaagagctg ccggctccgg tggctgaact acctccgccc cgacctccgg 420
cgaggcaaca tcacgccgca agagcagctg ctcatcctgg agctgcactc gcggtgggga 480
aaccgctggt ccaagatngc gcagcacctc ccgggaagca ccgacaacga gatnaagaat 540
acnngcgcac gcggtgcaga agcacccaag cagtcaagtg cnactcaaca gcaacantta 600
aggacncatg cgctactcng gatgcccgtc cttnagggat 640

<210> 22
<211> 115

<212> PRT
<213> Oryza sativa

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<222> (53)

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<400> 22
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1 5 10 15
Gly Gly Asp Leu Arg Arg Gly Pro Trp Thr Val Glu Glu Asp Leu Leu
20 25 30
Leu Val Asn Tyr Ile Ala Ala His Gly Glu Gly Arg Trp Asn Ser Leu
35 40 45
Ala Arg Ser Ala Xaa Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu Arg
50 55 60
Trp Leu Asn Tyr Leu Arg Pro Asp Leu Arg Arg Gly Asn Ile Thr Pro
65 70 75 80
Gln Glu Gln Leu Leu Ile Leu Glu Leu His Ser Arg Trp Gly Asn Arg
85 90 95
Trp Ser Lys Xaa Ala Gln His Leu Pro Gly Ser Thr Asp Asn Glu Xaa
100 105 110
Lys Asn Thr
115

<210> 23
<211> 484
<212> DNA
<213> Oryza sativa

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 ggggccatgg acgccggagg aggacctgat gctgggtctcc tacatccagg agcacggcgc 180
 cggcaactgg cgcgccgtgc cgacgaacac cgggctgatg cgttgacagca agagctgccg 240
 gctccgggtg acgaactacc tcaggccggg gatcaagcgg gggaacttca ccgagcanga 300
 ggagaagctc atcgtccacc tccaggtctt cctcggcaac cgggtgggcaa cgatnncgtc 360
 gtacttgccg gganangacg ncaacnacat cangaatact gggaacannc acctcangaa 420
 gaactcaaga anatgcaagc caccggaggt gnggaaaaca gcgcgncgnc tcgganngtt 480
 gcgg 484

<210> 24
 <211> 126
 <212> PRT
 <213> Oryza sativa

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 <222> (92)..(93)

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<400> 24
 Met Gly Arg Pro Pro Cys Cys Asp Lys Val Gly Val Xaa Lys Gly Pro
 1 5 10 15

Trp Thr Pro Glu Glu Asp Leu Met Leu Val Ser Tyr Ile Gln Glu His
 20 25 30

Gly Ala Gly Asn Trp Arg Ala Val Pro Thr Asn Thr Gly Leu Met Arg
 35 40 45

Cys Ser Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Gly
 50 55 60

Ile Lys Arg Gly Asn Phe Thr Glu Xaa Glu Glu Lys Leu Ile Val His
 65 70 75 80

Leu Gln Ala Leu Leu Gly Asn Arg Trp Ala Thr Xaa Xaa Ser Tyr Leu
85 90 95

Pro Gly Xaa Asp Xaa Asn Xaa Ile Xaa Asn Thr Gly Asn Xaa His Leu
100 105 110

Xaa Lys Asn Ser Arg Xaa Cys Lys Pro Pro Glu Val Xaa Lys
115 120 125

<210> 25
<211> 1427
<212> DNA
<213> Oryza sativa

<400> 25
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tgaagaaggg gccatggagc ccggaggagg acctgatgct ggtctcctac atccaggagc 180
acggcgccgg caactggcgc gccgtgccga cgaacaccgg gctgatgcgt tgcagcaaga 240
gctgccggct ccggtggagc aactacctca ggccggggat caagcggggg aacttcaccg 300
agcaggagga gaagctcatc gtccacctcc aggtctctct cggcaaccgg tgggcagcga 360
tagcgtcgta cttgccggag aggacggaça acgacatcaa gaactactgg aacacgcacc 420
tcaagaagaa gctcaagaag atgcaggccg ccggagggtg ggaagacagc ggcgccgcct 480
cggaggggtg cggcgccgcg ggcgacggcg acggcgccgg gaaaagcgtg aaggccgccg 540
cacctaaggg gcagtgggag cggcggtctg agacggacat ccacacggcg cggcaggcgc 600
tgcgcgacgc gctctcgctc gaccaccccg acccgtcgcc ggcgacggcg gcggcgggcg 660
cgacgccagc ggggtcgctc ggcggctacg cgtcgagcgc ggacaacatc gcgcggctgc 720
tgcagggtcg gatgcgcccg ggcggcgggc gcggcgccaa cggcaagggc cccgaggcgt 780
cggggctcgac ctccacgacg gcgacgacgc agcagcagcc gcagtgtctc ggcgaggggc 840
cggcatccgc gtccgcgtcg gcgagccaga gcggcgccgc cgcgcggcg actgccaga 900
cgccggagtg ctcgacggag acgagcaaga tggccaccgg cggcggcgcc ggcggccccc 960
cgccggcggt ctcgatgctg gagagctggc tgctcgacga cggcgggcat gggctcatgg 1020
acgtggtgcc attgggggac cccagttagt tcttttaagt gtagtacaac caaaattaaa 1080
ttaatcaagt agacagcaag aacaaaaaaa aataatggaa agttgccgag ttaattaatc 1140
aagatgcaac taatcaaac taattaaaag ggcttcgagt taattctcgg tgatttaaatt 1200
cgagtttgca ggtgttgatc tagcttggtt aattaatcct ttcttttgta ggtttttagt 1260
taattagtct ctctgatgat gctagggttt ggaactgac atagttaagt taatttatac 1320
taatggtagg cctgtgactt gtgattagtt agtcctgagt ggataaataa agacataaat 1380
gtacatcttt ttaaaagata aaaaaaaaaa aaaaaaaaaa aaaaaaa 1427

<210> 26
<211> 323
<212> PRT
<213> Oryza sativa

<400> 26
Met Gly Arg Pro Pro Cys Cys Asp Lys Val Gly Val Lys Lys Gly Pro
1 5 10 15

Trp Thr Pro Glu Glu Asp Leu Met Leu Val Ser Tyr Ile Gln Glu His
20 25 30

Gly Ala Gly Asn Trp Arg Ala Val Pro Thr Asn Thr Gly Leu Met Arg
35 40 45

Cys Ser Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Gly
50 55 60

Ile Lys Arg Gly Asn Phe Thr Glu Gln Glu Glu Lys Leu Ile Val His
 65 70 75 80
 Leu Gln Ala Leu Leu Gly Asn Arg Trp Ala Ala Ile Ala Ser Tyr Leu
 85 90 95
 Pro Glu Arg Thr Asp Asn Asp Ile Lys Asn Tyr Trp Asn Thr His Leu
 100 105 110
 Lys Lys Lys Leu Lys Lys Met Gln Ala Ala Gly Gly Gly Glu Asp Ser
 115 120 125
 Gly Ala Ala Ser Glu Gly Gly Gly Gly Arg Gly Asp Gly Asp Gly Gly
 130 135 140
 Gly Lys Ser Val Lys Ala Ala Ala Pro Lys Gly Gln Trp Glu Arg Arg
 145 150 155 160
 Leu Gln Thr Asp Ile His Thr Ala Arg Gln Ala Leu Arg Asp Ala Leu
 165 170 175
 Ser Leu Asp His Pro Asp Pro Ser Pro Ala Thr Ala Ala Ala Ala Ala
 180 185 190
 Thr Pro Ala Gly Ser Ser Ala Ala Tyr Ala Ser Ser Ala Asp Asn Ile
 195 200 205
 Ala Arg Leu Leu Gln Gly Trp Met Arg Pro Gly Gly Gly Gly Gly Gly
 210 215 220
 Asn Gly Lys Gly Pro Glu Ala Ser Gly Ser Thr Ser Thr Thr Ala Thr
 225 230 235 240
 Thr Gln Gln Gln Pro Gln Cys Ser Gly Glu Gly Ala Ala Ser Ala Ser
 245 250 255
 Ala Ser Ala Ser Gln Ser Gly Ala Ala Ala Ala Ala Thr Ala Gln Thr
 260 265 270
 Pro Glu Cys Ser Thr Glu Thr Ser Lys Met Ala Thr Gly Gly Gly Ala
 275 280 285
 Gly Gly Pro Ala Pro Ala Phe Ser Met Leu Glu Ser Trp Leu Leu Asp
 290 295 300
 Asp Gly Gly Met Gly Leu Met Asp Val Val Pro Leu Gly Asp Pro Ser
 305 310 315 320
 Glu Phe Phe

<210> 27
 <211> 557
 <212> DNA
 <213> Glycine max

<220>
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 <222> (552) .. (553)

<400> 27
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 aaaacaactg tgcaacacgt ctcaagatcc tgaagtgaga aaaggacctt ggacgatgga 120
 agaagacttg atcttngatc aactatattg caaatcatgg ggaagggtgtt tggaattctt 180

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tggccaaaag ctgctggtct caaacgtacc ggaaagattg cgggctaang tggctaaact 240
acctccgtcc tgatgttaga agaggggaata ntacacccga aggaacaact ttgatcatgg 300
agcttcacgc aaagtgggga aacaggtggt ccaaaattgc caagcatcta cctggtagga 360
cagtaatgag atnaagaact antggnggac aaggatcaga agcacatcaa gcaactgaga 420
attnagcaac aatcacataa ctctgagata atgttacaag ctagatacca agttntacaa 480
ggtgaaccat ggnnactatc ccaacctttt naaggaagtn angcatttct naatcnttcc 540
ccaaataacc gnntatc 557

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<210> 28
<211> 94
<212> PRT
<213> Glycine max

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<220>
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<222> (19)..(20)

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<220>
<221> UNSURE
<222> (51)

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<220>
<221> UNSURE
<222> (65)

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<400> 28
Ser Gln Asp Pro Glu Val Arg Lys Gly Pro Trp Thr Met Glu Glu Asp
 1             5             10             15
Leu Ile Xaa Xaa Ile Asn Tyr Ile Ala Asn His Gly Glu Gly Val Trp
             20             25             30
Asn Ser Leu Ala Lys Ser Cys Trp Ser Gln Thr Tyr Arg Lys Asp Cys
             35             40             45
Arg Leu Xaa Trp Leu Asn Tyr Leu Arg Pro Asp Val Arg Arg Gly Asn
 50             55             60
Xaa Thr Pro Glu Gly Thr Thr Leu Ile Met Glu Leu His Ala Lys Trp
 65             70             75             80
Asn Arg Trp Ser Lys Ile Ala Lys His Leu Pro Gly Arg Thr
             85             90

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<210> 29
<211> 988
<212> DNA
<213> Glycine max

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<400> 29
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atggataaaa aacaactgtg caacacgtct caagatcctg aagtgagaaa aggaccttgg 120
acgatggaag aagacttgat cttgatcaac tatattgcaa atcatgggga aggtgtttgg 180
aattcttttg ccaaagctgc tggctcmeta cgtaccggaa agagttgccg gctaaggtgg 240
ctaaactacc tccgtcctga tgtagaaga gggaatatta cacccgagga acaacttttg 300
atcatggagc ttcacgcaaa gtggggaaac aggtggtcca aaattgccaa gcatctacct 360
ggtaggacag ataatgagat caagaactat tggaggacca ggatccagaa gcacatcaag 420
caagctgaga actttcagca acaaactcagc aataactctg agataaatga tcaccaagct 480
agcactagcc atgtttctac catggctgaa cccatggaga cctattctcc acccttttat 540
caaggaatgt tagagccatt ttcttcaatt cagttcccca caattaatcc tgatcaatcc 600

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agttgttgta ccaatgacaa caacaacagc attaactatt ggagcatgga ggatatctgg 660
tcaatgcagt tactgaacgg ggattaaata ttgatataac aagataaacc taaattcttg 720
tataagttcc ataaaacact ggaatgtctc tggcttaaaa catattatta ttaggtttgt 780
ttatataagt agttggatat gtttggtttt gcgtaccatt attagcatat atatatatat 840
ttcaaatgag atgctatgtg cattgtaaaa gatatggtta agaaccacat agtttcaaaa 900
ctcttaataa taattccagt cacttattat aggaagtcta ttattaatta tctccaagat 960
gtttgcttaa aaaaaaaaaa aaaaaaaaaa 988

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<210> 30
<211> 208
<212> PRT
<213> Glycine max

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<400> 30
Met Asp Lys Lys Gln Leu Cys Asn Thr Ser Gln Asp Pro Glu Val Arg
 1          5          10          15

Lys Gly Pro Trp Thr Met Glu Glu Asp Leu Ile Leu Ile Asn Tyr Ile
      20          25          30

Ala Asn His Gly Glu Gly Val Trp Asn Ser Leu Ala Lys Ala Ala Gly
      35          40          45

Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu
      50          55          60

Arg Pro Asp Val Arg Arg Gly Asn Ile Thr Pro Glu Glu Gln Leu Leu
      65          70          75          80

Ile Met Glu Leu His Ala Lys Trp Gly Asn Arg Trp Ser Lys Ile Ala
      85          90          95

Lys His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Arg
      100          105          110

Thr Arg Ile Gln Lys His Ile Lys Gln Ala Glu Asn Phe Gln Gln Gln
      115          120          125

Ile Ser Asn Asn Ser Glu Ile Asn Asp His Gln Ala Ser Thr Ser His
      130          135          140

Val Ser Thr Met Ala Glu Pro Met Glu Thr Tyr Ser Pro Pro Phe Tyr
      145          150          155          160

Gln Gly Met Leu Glu Pro Phe Ser Ser Ile Gln Phe Pro Thr Ile Asn
      165          170          175

Pro Asp Gln Ser Ser Cys Cys Thr Asn Asp Asn Asn Asn Ser Ile Asn
      180          185          190

Tyr Trp Ser Met Glu Asp Ile Trp Ser Met Gln Leu Leu Asn Gly Asp
      195          200          205

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<210> 31
<211> 530
<212> DNA
<213> Glycine max

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<220>
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<400> 31
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 tggaaactctt tggccaaggc tgctggactt aaacgtaccg gaaagagttg ccggctccgg 180
 tggctaaact acctccgtcc tgatgttaga agaggggaata ttacaccga ggaacagctt 240
 ttgatcatgg aacttcatgc aaagtgggga aacaggtggt ccaaaattgc caagcatcta 300
 nccggaagga ctgataatga gattaagaac tactggagga caaggatcaa gaacantca 360
 agcaagcctt caacaacttc aacaacanag tantaattct gagataattt acatccaag 420
 cttgcacaac caattgtcaa caatgggcaa ccaaaaaaaaa ctaatctcan caatttcaag 480
 gaagnttatt cattnaatca attccaaaaa ccncacntct antgtttcaa 530

<210> 32
 <211> 204
 <212> PRT
 <213> Glycine max

<400> 32
 Met Asp Lys Lys Leu Gly Asn Thr Ser His Asp Pro Glu Val Arg Lys
 1 5 10 15

Gly Pro Trp Thr Met Glu Glu Asp Leu Ile Leu Ile Thr Tyr Ile Ala
 20 25 30
 Asn His Gly Glu Gly Val Trp Asn Ser Leu Ala Lys Ala Ala Gly Leu
 35 40 45
 Lys Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg
 50 55 60
 Pro Asp Val Arg Arg Gly Asn Ile Thr Pro Glu Glu Gln Leu Leu Ile
 65 70 75 80
 Met Glu Leu His Ala Lys Trp Gly Asn Arg Trp Ser Lys Ile Ala Lys
 85 90 95
 His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Arg Thr
 100 105 110
 Arg Ile Gln Lys His Leu Lys Gln Ala Ser Ser Ser Phe Gln Gln Gln
 115 120 125
 Ser Ser Asn Ser Glu Ile Ile Tyr His Pro Gln Ala Cys Thr Ser Gln
 130 135 140
 Val Ser Thr Met Ala Gln Pro Ile Glu Thr Tyr Ser Pro Pro Ser Tyr
 145 150 155 160
 Gln Gly Met Leu Asp Pro Phe Ser Ile Gln Phe Pro Thr Asn Pro His
 165 170 175
 His Ser Ser Cys Cys Thr Asn Asp Asp Asp Asn Asn Asn Tyr Trp Ser
 180 185 190
 Met Glu Asp Ile Trp Ser Met Gln Leu Ala Asn Tyr
 195 200

<210> 33
 <211> 910
 <212> DNA
 <213> Glycine max

<220>
 <221> unsure
 <222> (798)

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 <221> unsure
 <222> (807)

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 <222> (814)

<400> 33
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 aactatattg caaatcacgg tgaagggtgt tggatttctt tagccaaagc ttctgggtctt 180
 aaacgaacgg gaaagagttg tcgactccgt tggctaaact accttcgtcc tgatgttaga 240
 agaggaaaca ttacacccga agaacagctt ttgatcatag aacttcatgc aaagtggggc 300
 aataggtggt ccaaaattgc aaagcatctt ccaggaagaa ctgacaatga gattaagaac 360


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ttctggagaa ctaggatcca gaagcacatt aagcaagctg agacttcaca acaacatggg 420
aattcatcag agaatagtaa taatgatcat caagcaagca atagcactag caaggtgtcc 480
accatggcac atccaaatga gactttctct tcaccctcat accaagcaac ttttgagcca 540
tttcaacctc aattcctaca atcaatgatc aatcaagttg ttgtaccagc aacaacaact 600
attggagcat cgaggatata tggctgtcta tgcaattact caatggagat waattaaatc 660
tagctatatg catgcttata taaatcatat atgtgatgat atataaacct aagctcttat 720
tgagtgtggt caggcttaat aacatcatta ggtctggtat atatgagtag gttaagattg 780
gtgtgcatgc ctaaatgnag tattgcntta ttgnagtaag aataactagt tatggatgcc 840
tttaaaaaaa agttagttat gaattgaaat atatagtaac ttatatacta aaaaaaaaaa 900
aaaaaaaaaa

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<210> 34
<211> 206
<212> PRT
<213> Glycine max

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<400> 34
Met Asp Lys Lys Pro Cys Asp Ser Ser His Asp Pro Glu Val Arg Lys
  1              5              10              15

Gly Pro Trp Ile Met Glu Glu Asp Leu Ile Leu Ile Asn Tyr Ile Ala
      20              25              30

Asn His Gly Glu Gly Val Trp Asn Ser Leu Ala Lys Ala Ser Gly Leu
      35              40              45

Lys Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg
      50              55              60

Pro Asp Val Arg Arg Gly Asn Ile Thr Pro Glu Glu Gln Leu Leu Ile
      65              70              75              80

Ile Glu Leu His Ala Lys Trp Gly Asn Arg Trp Ser Lys Ile Ala Lys
      85              90              95

His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Phe Trp Arg Thr
      100             105             110

Arg Ile Gln Lys His Ile Lys Gln Ala Glu Thr Ser Gln Gln His Gly
      115             120             125

Asn Ser Ser Glu Asn Ser Asn Asn Asp His Gln Ala Ser Asn Ser Thr
      130             135             140

Ser Lys Val Ser Thr Met Ala His Pro Asn Glu Thr Phe Ser Ser Pro
      145             150             155             160

Ser Tyr Gln Ala Thr Phe Glu Pro Phe Gln Pro Gln Phe Leu Gln Ser
      165             170             175

Met Ile Asn Gln Val Val Val Pro Ala Thr Thr Thr Ile Gly Ala Ser
      180             185             190

Arg Ile Ser Gly Arg Leu Cys Asn Tyr Ser Met Glu Ile Asn
      195             200             205

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<210> 35
<211> 863
<212> DNA
<213> Glycine max

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<400> 35
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agatcctgaa gtgagaaaaa ggccttggac aatggaagaa gacttgatct tgatgaacta 120
tattgcaaat catggggaag gtgtttggaa ctctttggcc aaagctgctg gtctcaaacg 180
taacggaaaag agttgccggc taagggtggc aaattacctc cgtcctgatg ttagaagagg 240
gaatattaca cccgaggaac aacttttgat tatggagctc cagcgaaggt ggggaaacag 300
gtggtccaaa attgccaagc atctacctgg aaggactgat aatgagatca agaactattg 360
gaggacaagg atccagaagc acatcaagca agctgagaac ttccagcaac agagtagtaa 420
taattctgag ataaatgatc accaagctag cactagccat gtttccacca tggctgagcc 480
catggagatg tattctccac cctgttatca aggaatgtta gagccatttt caactcagtt 540
ccctacaatt aatcctgatc aatccagttg ttgtaccaat gacaacaaca acattaacta 600
ttggagcatg gaggatagct ggtcaatgca attactgaac ggtgattaaa tattatcaag 660
ataaaaccta agttytgaag ttccataagg ctggaatgtc tytgatttaa aacatattat 720
tgggtttgtt tatataagta gttggatgtt tggttttgcg taccattatt agctatgtgc 780
tgtaatatat acgagatytt atattaaact atatctgcat gctttatata taaaaaaaaa 840
aaaaaaaaaa aaaaaaaaaa aaa 863

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<210> 36
<211> 206
<212> PRT
<213> Glycine max

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<400> 36
Met Asp Lys Lys Gln Gln Cys Lys Thr Ser Gln Asp Pro Glu Val Arg
  1                      5                      10                      15

Lys Gly Pro Trp Thr Met Glu Glu Asp Leu Ile Leu Met Asn Tyr Ile
      20                      25                      30

Ala Asn His Gly Glu Gly Val Trp Asn Ser Leu Ala Lys Ala Ala Gly
      35                      40                      45

Leu Lys Arg Asn Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu
      50                      55                      60

Arg Pro Asp Val Arg Arg Gly Asn Ile Thr Pro Glu Glu Gln Leu Leu
      65                      70                      75                      80

Ile Met Glu Leu His Ala Lys Trp Gly Asn Arg Trp Ser Lys Ile Ala
      85                      90                      95

Lys His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Arg
      100                      105                      110

Thr Arg Ile Gln Lys His Ile Lys Gln Ala Glu Asn Phe Gln Gln Gln
      115                      120                      125

Ser Ser Asn Asn Ser Glu Ile Asn Asp His Gln Ala Ser Thr Ser His
      130                      135                      140

Val Ser Thr Met Ala Glu Pro Met Glu Met Tyr Ser Pro Pro Cys Tyr
      145                      150                      155                      160

Gln Gly Met Leu Glu Pro Phe Ser Thr Gln Phe Pro Thr Ile Asn Pro
      165                      170                      175

Asp Gln Ser Ser Cys Cys Thr Asn Asp Asn Asn Asn Ile Asn Tyr Trp
      180                      185                      190

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Ser Met Glu Asp Ser Trp Ser Met Gln Leu Leu Asn Gly Asp
 195 200 205

<210> 37
 <211> 805
 <212> DNA
 <213> Glycine max

<400> 37
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 gaagaagact tgatcttgat aaactatatt gcaaatcacg gtgaaggtgt ttggaactcc 120
 tttagccaaag cttctggtct caaacgaacg ggaaagagtt gtcgactccg ttggctaaac 180
 taccttcgtc ctgatgttag aagaggaaac attacacccg aggaacagct ttgatcata 240
 gaacttcatt caaagtgggg caatagggtg tccaaaattg caaagcatct tccaggaaga 300
 actgacaatg agattaagaa cttctggaga acaaggatcc aaaagcacat taagcaagct 360
 gagacttcac aacaacatgg taattcagag aataatgata atcaagcaag cactagtact 420
 agcaaagtgt ccaccatggc acatccaaat gagactttct ctccaccctc ataccaagga 480
 acttttgagc cattccaacc tcaattccct acaatcactg atcaatcaag ttgttggtacc 540
 accaccaacg acaacaacaa ctattggagc atcgaggata tctggtcgtc tatgcaatta 600
 ctcaatggag attaaacctt gctatatgca tgcctatata aatcatatat atgatgatat 660
 ataaacctaa gctctttagt agtgtgttca ggcttaataa catcattagg tctgtttata 720
 tgagtagtct aagtttggtg tttgtaatgc atgatgtgag ttaagaatta atttagttat 780
 ggttggaata aaaaaaaaaa aaaaaa 805

<210> 38
 <211> 204
 <212> PRT
 <213> Glycine max

<400> 38
 Lys Lys Pro Cys Asn Ser Ser Ser His Asp Pro Glu Val Arg Lys Gly
 1 5 10 15
 Pro Trp Thr Met Glu Glu Asp Leu Ile Leu Ile Asn Tyr Ile Ala Asn
 20 25 30
 His Gly Glu Gly Val Trp Asn Ser Leu Ala Lys Ala Ser Gly Leu Lys
 35 40 45
 Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg Pro
 50 55 60
 Asp Val Arg Arg Gly Asn Ile Thr Pro Glu Glu Gln Leu Leu Ile Ile
 65 70 75 80
 Glu Leu His Ala Lys Trp Gly Asn Arg Trp Ser Lys Ile Ala Lys His
 85 90 95
 Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Phe Trp Arg Thr Arg
 100 105 110
 Ile Gln Lys His Ile Lys Gln Ala Glu Thr Ser Gln Gln His Gly Asn
 115 120 125
 Ser Glu Asn Asn Asp His Gln Ala Ser Thr Ser Thr Ser Lys Val Ser
 130 135 140
 Thr Met Ala His Pro Asn Glu Thr Phe Ser Pro Pro Ser Tyr Gln Gly
 145 150 155 160

Thr Phe Glu Pro Phe Gln Pro Gln Phe Pro Thr Ile Thr Asp Gln Ser
165 170 175

Ser Cys Cys Thr Thr Thr Asn Asp Asn Asn Asn Tyr Trp Ser Ile Glu
180 185 190

Asp Ile Trp Ser Ser Met Gln Leu Leu Asn Gly Asp
195 200

<210> 39
<211> 751
<212> DNA
<213> Glycine max

<400> 39
tggatgttaa gaaaggtggg tctgtagtac aagcacaagt gaagttgcag aagcataacg 60
aaaaggagat gggcatgaga aaaggtccat gggcggttga ggaggacacc attctggtca 120
attacatcgc cacacacggt gaaggccact ggaattccgt ggcacgatgt gcaggtctaa 180
ggaggagtgg gaagagttgc agattaaggt ggctaaacta cttgcgcca gacgtgcggc 240
gtggaaatat cacactccaa gaacaaatat taattctcga ccttcactct cgctggggca 300
acaggtggtc aaagattgct caacagctgc caggaagaac agacaacgaa ataaagaact 360
attggaggac cagagtgata aaacaagcga agcagctaaa gtgcgatgtg aatagcaaac 420
agttcagaga cacgttgctg tacgtttgga tgccgcgctt gctggagcgg cttcagccca 480
catcacaagc actggagcca aaccaaagtg gacttggtt acacgcttca tcatcactgc 540
ttccttcgaa ttccgacat agtattgaaa gggggtcgga tctgtggcca ggtttcaata 600
accaaagtgt gttggaacag gggagtggcg gtgacttggt ggaaagtttg tgggatgacg 660
acaatatgtg ctttttgcaa cagctttctt atgacctcca aatgaaataa aatacaattc 720
ccttcgctca cgcaaaaaaa aaaaaaaaaa a 751

<210> 40
<211> 235
<212> PRT
<213> Glycine max

<400> 40
Asp Val Lys Lys Gly Gly Ser Val Val Gln Ala Gln Val Lys Leu Gln
1 5 10 15

Lys His Asn Glu Lys Glu Met Gly Met Arg Lys Gly Pro Trp Ala Val
20 25 30

Glu Glu Asp Thr Ile Leu Val Asn Tyr Ile Ala Thr His Gly Glu Gly
35 40 45

His Trp Asn Ser Val Ala Arg Cys Ala Gly Leu Arg Arg Ser Gly Lys
50 55 60

Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg Pro Asp Val Arg Arg
65 70 75 80

Gly Asn Ile Thr Leu Gln Glu Gln Ile Leu Ile Leu Asp Leu His Ser
85 90 95

Arg Trp Gly Asn Arg Trp Ser Lys Ile Ala Gln Gln Leu Pro Gly Arg
100 105 110

Thr Asp Asn Glu Ile Lys Asn Tyr Trp Arg Thr Arg Val Ile Lys Gln
115 120 125

Ala Lys Gln Leu Lys Cys Asp Val Asn Ser Lys Gln Phe Arg Asp Thr
130 135 140

Leu Arg Tyr Val Trp Met Pro Arg Leu Leu Glu Arg Leu Gln Pro Thr
145 150 155 160

Ser Gln Ala Leu Glu Pro Asn Gln Ser Gly Leu Val Leu His Ala Ser
165 170 175

Ser Ser Leu Leu Pro Ser Asn Ser Asp His Ser Ile Glu Arg Gly Ser
180 185 190

Asp Leu Trp Pro Gly Phe Asn Asn Gln Met Leu Leu Glu Gln Gly Ser
195 200 205

Gly Gly Asp Leu Leu Glu Ser Leu Trp Asp Asp Asp Asn Met Cys Phe
210 215 220

Leu Gln Gln Leu Ser Tyr Asp Leu Gln Met Lys
225 230 235

<210> 41
<211> 500
<212> DNA
<213> Glycine max

<400> 41
catttctaata tgttctgata catatatata atacttttctt tgtaataact taaagaaccc 60
cacaaaaaca ccaaccatgt ccacaattgc aaagagagat ttgagttcta atgaagaaga 120
gagtgaagctg agaagaggct cttggactct tgaagaagac agcttactca tacactatat 180
tgctcgatcat ggtgaaggcc gttggaatat gttagccaaa agtgcaggat tgaagaggac 240
tggaaaaagt tgcagactta gatggctgaa ttatttgaaa ccagacatta agagagggaa 300
cctcactcca caggagcaac tcttgatcct tgaactccat tccaagtggg gtaacagggtg 360
gtcaaaaatt gctcagcatc tgccaggaag aacagacaat gagatcaaga actattggag 420
aacaaggata cagaaacagg gcacgccaac ttaacattga atctggtagc aagagattca 480
ttgatgctgt cagtgttttt 500

<210> 42
<211> 229
<212> PRT
<213> Glycine max

<220>
<221> UNSURE
<222> (138)

<400> 42
Met Ser Thr Ile Ala Lys Arg Asp Leu Ser Ser Asn Glu Glu Glu Ser
1 5 10 15

Glu Leu Arg Arg Gly Pro Trp Thr Leu Glu Glu Asp Ser Leu Leu Ile
20 25 30

His Tyr Ile Ala Arg His Gly Glu Gly Arg Trp Asn Met Leu Ala Lys
35 40 45

Ser Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu
50 55 60

Asn Tyr Leu Lys Pro Asp Ile Lys Arg Gly Asn Leu Thr Pro Gln Glu
 65 70 75 80
 Gln Leu Leu Ile Leu Glu Leu His Ser Lys Trp Gly Asn Arg Trp Ser
 85 90 95
 Lys Ile Ala Gln His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn
 100 105 110
 Tyr Trp Arg Thr Arg Ile Gln Lys Gln Ala Arg Gln Leu Asn Ile Glu
 115 120 125
 Ser Gly Ser Lys Arg Phe Ile Asp Ala Xaa Lys Cys Phe Trp Met Pro
 130 135 140
 Arg Leu Leu Gln Lys Met Glu Gln Ser Asn Ser Pro Ser Pro His His
 145 150 155 160
 Ser Ser Met Thr Asn Met Met Asn Leu Gly Asn Ser Gly Glu Ala Ser
 165 170 175
 Met Ser Ser Met Ser Ser Ser Phe Asn Ile Asn Pro Ser Met Ser Ser
 180 185 190
 Ser Ser Ser Pro Pro Lys Gly Asn Leu Leu Trp Met Met Pro Asn His
 195 200 205
 Phe Lys Tyr Tyr Val Gln Pro His Gln Ser Ile Pro Arg Phe Leu Pro
 210 215 220
 Ile Phe Thr Ala Thr
 225

<210> 43
 <211> 1348
 <212> DNA
 <213> Glycine max

<400> 43
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 ttttgttctg agagaatcaa tggatggaaa aggagcaaga agtagcaaca cccttttaag 120
 tagtgaggac gagatggacc ttogaagagg cccttggaac gtcgatgaag acctcactct 180
 tatcaattac gttgccactc atggcggaagg tcgctggaat accctcgccc tctctgctgg 240
 gctgaaacga acggggaaga gttgcagatt gaggtggctg aattatctgc gtcctgatgt 300
 tcgacgtgga aacatcacgc ttgaagaaca acttttgatt ctggagctcc attctcgctg 360
 gggaaaccga tggtcgaaaa ttgctcaata tttgcctggt agaaccgaca atgagataaa 420
 gaactatttg agaaccctgt tccaaaagca tgccaagcaa ctcaaattgcg acgtgaatag 480
 caagcaattc aaggacacca tgcgttacat ttggatgcca aggctcgtgg aacgcattca 540
 agccaccgct gccgcctccg caccacaacc cgttaccgta ccaccgagac caacaatgca 600
 tacacctacg gaagcaacct taataacaac aaattcgagg ttcacgatca caagggcaaa 660
 atgggggttaa ccgatccttc agttatgaac aatgacttaa tgggttcaca tgtcacgcaa 720
 agttacaccc ctgagaatag tagcacccgt gcgtcatcat cagactcgtt tgggactcaa 780
 gtctcagcaa tttctgattt gactgaatat tacactgtca ctggtagtgg taacaataac 840
 aatactaatt ctgcggatta ttatcaaccc tctcaaatta gttactcgga tagttgcac 900
 acaagcccat ctgggttggt ccctcaaggg ctagattttc aatccatgga tccaaacacc 960
 ccgtggaaca tgcaaaagtgg ggactcctct gacagttttt ggaacgttga aagcatgttg 1020
 ttcttagagc agcaactcat gaatgacaac atgtgaaaac attgggaata ggaaaataag 1080
 acttagatac ggttcttctt agtattgtgt tttaattaaa gttaaagtta acacaagtta 1140
 ttgaagtga aacttaattt taattgaata ataatactga aaacaagagt tgtattttaag 1200
 ttttattctt ttatgaatta tgaattagat tgacagaagg ggttggttgt gaaatataca 1260

ggtgaaagta tagaaagtag caacattaat aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1320
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1348

<210> 44
 <211> 196
 <212> PRT
 <213> Glycine max

<400> 44
 Met Asp Gly Lys Gly Ala Arg Ser Ser Asn Thr Leu Leu Ser Ser Glu
 1 5 10 15
 Asp Glu Met Asp Leu Arg Arg Gly Pro Trp Thr Val Asp Glu Asp Leu
 20 25 30
 Thr Leu Ile Asn Tyr Val Ala Thr His Gly Glu Gly Arg Trp Asn Thr
 35 40 45
 Leu Ala Leu Ser Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu
 50 55 60
 Arg Trp Leu Asn Tyr Leu Arg Pro Asp Val Arg Arg Gly Asn Ile Thr
 65 70 75 80
 Leu Glu Glu Gln Leu Leu Ile Leu Glu Leu His Ser Arg Trp Gly Asn
 85 90 95
 Arg Trp Ser Lys Ile Ala Gln Tyr Leu Pro Gly Arg Thr Asp Asn Glu
 100 105 110
 Ile Lys Asn Tyr Trp Arg Thr Arg Val Gln Lys His Ala Lys Gln Leu
 115 120 125
 Lys Cys Asp Val Asn Ser Lys Gln Phe Lys Asp Thr Met Arg Tyr Ile
 130 135 140
 Trp Met Pro Arg Leu Val Glu Arg Ile Gln Ala Thr Ala Ala Ala Ser
 145 150 155 160
 Ala Pro Gln Pro Val Thr Val Pro Pro Arg Pro Thr Met His Thr Pro
 165 170 175
 Thr Glu Ala Thr Leu Ile Thr Thr Asn Ser Arg Phe Thr Ile Thr Arg
 180 185 190
 Ala Lys Trp Gly
 195

<210> 45
 <211> 1236
 <212> DNA
 <213> Glycine max

<220>
 <221> unsure
 <222> (519)

<220>
 <221> unsure
 <222> (521)

<220>
 <221> unsure
 <222> (530)..(531)

<220>
 <221> unsure
 <222> (534)

<220>
 <221> unsure
 <222> (800)

<220>
 <221> unsure
 <222> (1124)

<220>
 <221> unsure
 <222> (1151)

<400> 45
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 aaacttaatt tcttttgttt tgagtttctt agagaatgga tgaaaaagga gcaagaagta 120
 gcaacaccct tttaagttgt gaggacgaga tggaccttcg aagaggccct tggaccgtcg 180
 atgaagacct cactcttatac aattacattg ccactcatgg cgaaggtcgc tggaacacgc 240
 tcgcctctctc tgctgggctg aaacgaacgg ggaagagttg cagattgagg tggctgaatt 300
 atctgcgtcc tgatgttcga cgtggaaaca tcacacttga agaacaactt ttgattcttg 360
 agcttcattc tcgctgggga aaccgttggt cgaaaattgc tcaatatttg cctggtagaa 420
 ccgacaacga gataaagaac tattggagaa cccgtgtcca aaagcatgcc aagcaactca 480
 aatgtgacgt gaatagcaag caattcaagg acaccatgng ntacctttgn natnccaagg 540
 ctctgtggaac gcattcaagc agcggcgacg gcccccgtaa ccaccaccgt aactgcggcc 600
 gccaccaaca atgcattcac ctacgggraac aaccttatac caccaaattc gaggttctga 660
 atcacaaggg cagaatgggg ttaaccgatc cttcagttgc gaacaatgac tttgtgggtt 720
 cacatgtcac gcaaagggtac cctactcctg agaatagtag cacgggtgcg tcatcatcag 780
 actcgttttg gactcaagtn tcaacaattt ctgatttgac tgaaaattcc agtgtccctg 840
 aaaatactaa ttctgcggat tattatcaac cctctcaaat tagtaattac tcggataatt 900
 gcatcacaag cccatctggg ttcttgttcc ctcaaggact agatcttcaa tccatggatc 960
 caaacacacc gtggaacatg caaagtgggg actcctctga caatttttgg gacgttgaaa 1020
 gcatgttatt cttagagcag caactcatga atgacaacat gtgaaacatt ggggaatagga 1080
 aaataagact tagatacggg tcttctaata ttttttagtg ktgngtttta attaaagtta 1140
 aagttaacac nagttattga agtgaaactt taattttaat taaataataa tcctgaaaaa 1200
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 1236

<210> 46
 <211> 322
 <212> PRT
 <213> Glycine max

<220>
 <221> UNSURE
 <222> (142)

<220>
 <221> UNSURE
 <222> (145)..(146)..(147)

<220>
 <221> UNSURE
 <222> (178)

<400> 46
 Met Asp Glu Lys Gly Ala Arg Ser Ser Asn Thr Leu Leu Ser Cys Glu
 1 5 10 15
 Asp Glu Met Asp Leu Arg Arg Gly Pro Trp Thr Val Asp Glu Asp Leu
 20 25 30
 Thr Leu Ile Asn Tyr Ile Ala Thr His Gly Glu Gly Arg Trp Asn Thr
 35 40 45
 Leu Ala Leu Ser Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu
 50 55 60
 Arg Trp Leu Asn Tyr Leu Arg Pro Asp Val Arg Arg Gly Asn Ile Thr
 65 70 75 80
 Leu Glu Glu Gln Leu Leu Ile Leu Glu Leu His Ser Arg Trp Gly Asn
 85 90 95
 Arg Trp Ser Lys Ile Ala Gln Tyr Leu Pro Gly Arg Thr Asp Asn Glu
 100 105 110
 Ile Lys Asn Tyr Trp Arg Thr Arg Val Gln Lys His Ala Lys Gln Leu
 115 120 125
 Lys Cys Asp Val Asn Ser Lys Gln Phe Lys Asp Thr Met Xaa Tyr Leu
 130 135 140
 Xaa Xaa Xaa Lys Ala Arg Gly Thr His Ser Ser Ser Gly Asp Gly Pro
 145 150 155 160
 Arg Asn His His Arg Asn Cys Gly Arg His Gln Gln Cys Ile His Leu
 165 170 175
 Arg Xaa Gln Pro Tyr Thr Thr Lys Phe Glu Val Leu Asn His Lys Gly
 180 185 190
 Arg Met Gly Leu Thr Asp Pro Ser Val Ala Asn Asn Asp Phe Val Gly
 195 200 205
 Ser His Val Thr Gln Arg Tyr Pro Thr Pro Glu Asn Ser Ser Thr Gly
 210 215 220
 Ala Ser Ser Ser Asp Ser Phe Gly Thr Gln Val Ser Thr Ile Ser Asp
 225 230 235 240
 Leu Thr Glu Asn Ser Ser Val Pro Glu Asn Thr Asn Ser Ala Asp Tyr
 245 250 255
 Tyr Gln Pro Ser Gln Ile Ser Asn Tyr Ser Asp Asn Cys Ile Thr Ser
 260 265 270
 Pro Ser Gly Phe Leu Phe Pro Gln Gly Leu Asp Leu Gln Ser Met Asp
 275 280 285
 Pro Asn Thr Pro Trp Asn Met Gln Ser Gly Asp Ser Ser Asp Asn Phe
 290 295 300

Trp Asp Val Glu Ser Met Leu Phe Leu Glu Gln Gln Leu Met Asn Asp
 305 310 315 320

Asn Met

<210> 47
 <211> 1181
 <212> DNA
 <213> Glycine max

<400> 47
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 gacaatgaac ttagaagagg gccttggact ctggaagagg ataacttgct ctcccaatat 120
 atttttaatc atggggaagg gcgatggaat ttgctggcta aacgttcagg attaaagaga 180
 actgggaaaa gttgcagatt aaggtggcta aattatctaa agccagatgt aaaacgggga 240
 aatttaaccc cacaagagca acttataatt cttgaactcc actcaaagtg gggaaacagg 300
 tgggtcaaaaa ttgcacaaca tttgccaggc agaacagaca atgaaatcaa gaactattgg 360
 agaactagga ttcagaaaca agcaagacat ttgaaaatct aactgacag cagagagttt 420
 caagaacttg ttaggcgttt ctggatgcct agattgcttc agaaagcaaa agaatacatc 480
 tcttcaaaca tgtcaattca aaaccaggca attcctatgc cttttgatta tgtttctcag 540
 catttaactg ttggggaccat acctccttgg caggggacott gtatgaatga agctgggtccc 600
 acttacatgg accaacaatga gcagactcag actcgggaaca ccaacaatgg ttcatgcac 660
 tccttgtctg agtcagcaaa tattccaaaa gtgcctcagc attttggaca caccaccatc 720
 acccaatttc atgccttgaa taccaatgac tttggcacct tcacatatga aggttataat 780
 gtaaacaca atgtctatga gatggacaac ttcaaaacga ctactacatg ggtggctgag 840
 gatgcgcaat acccaattgg tgattgtcaa atggtaggaa gcaattgggt aaacaacgat 900
 tttgcatgta acatgtggaa catggatgaa ctgtggcagt ttagcaagtt acaaaaaataa 960
 gatttttaggg ttttgttttt tttggaataa ccaaaagtcc aaaactcttt ctttgatgac 1020
 gttattattg ttatcatgaa ctgtggatta gctaccgaat taattaatac agatggcgat 1080
 tgttttctgt acatctgtct tgtattactc tgttcagata agtacttttg taatttgtat 1140
 tgattgagaa aagtcattaa ttagtcacta gtacaaaaaa a 1181

<210> 48
 <211> 312
 <212> PRT
 <213> Glycine max

<400> 48
 Met Ser Thr Ser Lys Ser Val Ser Ser Ser Ser Glu Asp Asp Asn Glu
 1 5 10 15
 Leu Arg Arg Gly Pro Trp Thr Leu Glu Glu Asp Asn Leu Leu Ser Gln
 20 25 30
 Tyr Ile Phe Asn His Gly Glu Gly Arg Trp Asn Leu Leu Ala Lys Arg
 35 40 45
 Ser Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn
 50 55 60
 Tyr Leu Lys Pro Asp Val Lys Arg Gly Asn Leu Thr Pro Gln Glu Gln
 65 70 75 80
 Leu Ile Ile Leu Glu Leu His Ser Lys Trp Gly Asn Arg Trp Ser Lys
 85 90 95
 Ile Ala Gln His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr
 100 105 110

Trp Arg Thr Arg Ile Gln Lys Gln Ala Arg His Leu Lys Ile Tyr Thr
 115 120 125
 Asp Ser Arg Glu Phe Gln Glu Leu Val Arg Arg Phe Trp Met Pro Arg
 130 135 140
 Leu Leu Gln Lys Ala Lys Glu Ser Ser Ser Ser Asn Met Ser Ile Gln
 145 150 155 160
 Asn Gln Ala Ile Pro Met Pro Phe Asp Tyr Val Ser Gln His Leu Thr
 165 170 175
 Val Gly Thr Ile Pro Pro Trp Gln Gly Pro Cys Met Asn Glu Ala Gly
 180 185 190
 Pro Thr Tyr Met Asp Gln His Glu Gln Thr Gln Thr Arg Asn Thr Asn
 195 200 205
 Asn Gly Ser Cys Ile Ser Leu Ser Glu Ser Ala Asn Ile Pro Lys Val
 210 215 220
 Pro Gln His Phe Gly His Thr Thr Ile Thr Gln Phe His Ala Leu Asn
 225 230 235 240
 Thr Asn Asp Phe Gly Thr Phe Thr Tyr Glu Gly Tyr Asn Val Asn Asn
 245 250 255
 Asn Val Tyr Glu Met Asp Asn Phe Lys Thr Thr Thr Thr Trp Val Ala
 260 265 270
 Glu Asp Ala Gln Tyr Pro Ile Gly Asp Cys Gln Met Val Gly Ser Asn
 275 280 285
 Trp Val Asn Asn Asp Phe Ala Cys Asn Met Trp Asn Met Asp Glu Leu
 290 295 300
 Trp Gln Phe Ser Lys Leu Gln Lys
 305 310

<210> 49
 <211> 1186
 <212> DNA
 <213> Glycine max

<400> 49
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 tgaacttaga agagggcctt ggactcttga agaggataat ttgctctccc aatataatttc 120
 tagtcatgga gaagggcgat ggaatttgct agctaaacgt tcaggattaa agcgaactgg 180
 gaaaagttgc agattaaggt ggctaaatta tctaaagcca gatgtaaaac ggggaaattt 240
 aaccccacaa gagcaactta taatcctcga actccactca aagtggggaa acaggtggtc 300
 aaaaattgca caaaatttgc caggcagaac agacaatgaa atcaagaact attggagaac 360
 taggattcag aaacaagcaa gacatttgaa aattgacact gacaccagag agtttcagga 420
 acttgttagg cgtttctgga tgcctagatg cttcaaaaag cccaagaatc atcttcttca 480
 gccatgtcaa ttcaaaacca ggcaactcct atgccttttg atggtgtttc tcagcattca 540
 actgttgagg ccataccatc acattcacac accccttggc agggaccttg tatgaatgaa 600
 gctggtccca cttacatgga ccaacatgag cagaactcag actctgaaca caacaatggt 660
 tcatgcatct ccttgctctga gtcagcaaat tttccaaaag tgcctcagca ttttggaagc 720
 accaccatca cccaatatca tgccttgaat aacaatgact ttggcacctt cacatatgac 780
 ggctacaatg taagcaacaa tgtctatgag atggacaact tcaaaacgcc tactacaagg 840
 gtggctgagg atgcgcaata cccaactggt gattgtcaaa tggttaggaag caattgggta 900

aacagcgcatt ttgcatgtaa catgtggaac atggatgaat tgtggcaatt tagcaagtta 960
caaaaaataag attttaggggt ttgggtttttt tggagttacc aagactctat ctttggtgat 1020
gttattattg ttatcatgaa ctgttgatta gctactacca aattaattaa tacagatggg 1080
gattgttttc tgtacatctg ttttgcatta ctctgttttg caatttgtat tgattgagaa 1140
aagtcattaa ttagtcacta gttcaaaaaca caaaaaaaaa aaaaaa 1186

<210> 50
<211> 192
<212> PRT
<213> Glycine max

<400> 50
Met Ser Thr Ser Lys Ser Val Ser Ser Ser Ser Glu Asp Asp Asn Glu
1 5 10 15
Leu Arg Arg Gly Pro Trp Thr Leu Glu Glu Asp Asn Leu Leu Ser Gln
20 25 30
Tyr Ile Ser Ser His Gly Glu Gly Arg Trp Asn Leu Leu Ala Lys Arg
35 40 45
Ser Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn
50 55 60
Tyr Leu Lys Pro Asp Val Lys Arg Gly Asn Leu Thr Pro Gln Glu Gln
65 70 75 80
Leu Ile Ile Leu Glu Leu His Ser Lys Trp Gly Asn Arg Trp Ser Lys
85 90 95
Ile Ala Gln Asn Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr
100 105 110
Trp Arg Thr Arg Ile Gln Lys Gln Ala Arg His Leu Lys Ile Asp Thr
115 120 125
Asp Thr Arg Glu Phe Gln Glu Leu Val Arg Arg Phe Trp Met Pro Arg
130 135 140
Cys Phe Lys Lys Pro Lys Asn His Leu Leu Gln Pro Cys Gln Phe Lys
145 150 155 160
Thr Arg Gln Leu Leu Cys Leu Leu Met Val Phe Leu Ser Ile Gln Leu
165 170 175
Leu Gly Pro Tyr His His Ile His Thr Pro Leu Gly Arg Asp Leu Val
180 185 190

<210> 51
<211> 487
<212> DNA
<213> Glycine max

<220>
<221> unsure
<222> (358)

<220>
<221> unsure
<222> (429)

<400> 51
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agatagagag aggaaaacga cctatatattt ttttcctttg agagcttcag gggctaggaa 120
aattagaagg acagccacaa gtataaaggc ggtgaaataa aagagaaaga caagaaggag 180
acatgggaag accaccttgt tgtgacaaag aaggggtcaa gaaagggcct tggactcctg 240
aagaagacat catattggtg tcttatattc aggaacatgg tcctggaaat tggagggcag 300
ttcctgccaa aacaggggtg tcaagatgca gcaagagttg cagacttaga tggacgantt 360
acctgaggcc aggaatcaag cgtggtaact tcacaagaac aagaggagaa gatgataatc 420
catcttcang atcttttagg aaacagatgg ggtgcaatag cttcatacct tccacaaagg 480
acaaggg 487

<210> 52
<211> 90
<212> PRT
<213> Glycine max

<220>
<221> UNSURE
<222> (59)

<220>
<221> UNSURE
<222> (72)

<220>
<221> UNSURE
<222> (83)

<400> 52
Met Gly Arg Pro Pro Cys Cys Asp Lys Glu Gly Val Lys Lys Gly Pro
1 5 10 15
Trp Thr Pro Glu Glu Asp Ile Ile Leu Val Ser Tyr Ile Gln Glu His
20 25 30
Gly Pro Gly Asn Trp Arg Ala Val Pro Ala Lys Thr Gly Leu Ser Arg
35 40 45
Cys Ser Lys Ser Cys Arg Leu Arg Trp Thr Xaa Tyr Leu Arg Pro Gly
50 55 60
Ile Lys Arg Gly Asn Phe Thr Xaa Glu Gln Glu Glu Lys Met Ile Ile
65 70 75 80
His Leu Xaa Asp Leu Leu Gly Asn Arg Trp
85 90

<210> 53
<211> 1556
<212> DNA
<213> Glycine max

<400> 53
gcacgaggag aaataaaaag agaagaaaga aaacacgata gtatcatcat atcaccacca 60
cacacataga tagagagagg aaaacgacct atattttttt tcctttgaga gcttcagggg 120
ctaggaaaat tagaaggaca gccacaagta taaaggcggg gaaataaaaag agaaagacaa 180
gaaggagaca tggaagacc acctgttgt gacaaagaag ggggtcaagaa agggccttgg 240
actcctgaag aagacatcat attggtgtct tatattcagg aacatgggtcc tggaaattgg 300
agggcagttc ctgccaaaac agggttgtca agatgcagca agagttgcag acttagatgg 360

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acgaattacc tgaggccagg aatcaagcgt ggtaacttca cagaacaaga ggagaagatg 420
ataatccatc ttcaagatct tttaggaaac agatgggctg caatagcttc ataccttcca 480
caaagaacag acaatgacat aaagaactat tggaataccc atttgagaaa gaagctgaag 540
aagatgcaag caggcgggtga aggtggtagc tttggagaag ggttttcagc ctcaaggcaa 600
atccctagag gccagtggga aagaaggctc caaactgata tccaaatggc aaagagagcc 660
ctcagtgaag ctctttcacc agagaaaaag ccatcttggt tatctgcctc aaactcaaac 720
ccttcagata gtagcagctc cttctcttcc acaaaaacca caacaacaca atctgtgtgc 780
tatgcatcaa gtgctgacaa catagctaga atgctcaagg gttggatgaa gaaccaccca 840
aagtcctcaa gaaccaactc gtctatgact cagaactcat tcaacaactt agcaggtgct 900
gatactgctt gtagtagtgg agcaaaggga ccactaagca gtgccgaatt gtctgagaat 960
aattttgaat ccttgtttga ttttgatcag tctttggagt cttcaaactc tgatcaattc 1020
tctcagtcct tgtctcctga ggccactggt ttgcaagatg aaagcaagcc tgatattaat 1080
attgctgcag aaattatgcc cttctctttg cttgagaaat ggctccttga tgaggcaggt 1140
tgccaagaga aattagtggg ttgttggtgg gatgccaaat ttttctaagt tgggttcatt 1200
ttgtgcata tgagactgtg ggattttttt attttatttt attttatttc ataagttata 1260
ggtagggcct catcaattaa tctcgcttcg gccttattag agagagaagt tttccagcct 1320
ttggtgctag acgtgtatat gttaattatt attgacatta tgatgattat tatcatactg 1380
tgttagtgtc catacactgg caaacttgct tctcttatgt aaagttgatc ttgcgacgag 1440
atcctgcttt atggcttttag gcagcgcgac cggctctctc tctttgtgtc gcttgattag 1500
taaccccccc cggggggggc ccgggtccaa atcccccccta atgggggtcct ttttag 1556

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<210> 54
<211> 332
<212> PRT
<213> Glycine max

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<400> 54
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Met Gly Arg Pro Pro Cys Cys Asp Lys Glu Gly Val Lys Lys Gly Pro
 1              5              10              15

Trp Thr Pro Glu Glu Asp Ile Ile Leu Val Ser Tyr Ile Gln Glu His
          20              25              30

Gly Pro Gly Asn Trp Arg Ala Val Pro Ala Lys Thr Gly Leu Ser Arg
          35              40              45

Cys Ser Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Gly
          50              55              60

Ile Lys Arg Gly Asn Phe Thr Glu Gln Glu Glu Lys Met Ile Ile His
          65              70              75              80

Leu Gln Asp Leu Leu Gly Asn Arg Trp Ala Ala Ile Ala Ser Tyr Leu
          85              90              95

Pro Gln Arg Thr Asp Asn Asp Ile Lys Asn Tyr Trp Asn Thr His Leu
          100             105             110

Arg Lys Lys Leu Lys Lys Met Gln Ala Gly Gly Glu Gly Gly Ser Phe
          115             120             125

Gly Glu Gly Phe Ser Ala Ser Arg Gln Ile Pro Arg Gly Gln Trp Glu
          130             135             140

Arg Arg Leu Gln Thr Asp Ile Gln Met Ala Lys Arg Ala Leu Ser Glu
          145             150             155             160

Ala Leu Ser Pro Glu Lys Lys Pro Ser Cys Leu Ser Ala Ser Asn Ser
          165             170             175

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Asn Pro Ser Asp Ser Ser Ser Ser Phe Ser Ser Thr Lys Pro Thr Thr
 180 185 190
 Thr Gln Ser Val Cys Tyr Ala Ser Ser Ala Asp Asn Ile Ala Arg Met
 195 200 205
 Leu Lys Gly Trp Met Lys Asn Pro Pro Lys Ser Ser Arg Thr Asn Ser
 210 215 220
 Ser Met Thr Gln Asn Ser Phe Asn Asn Leu Ala Gly Ala Asp Thr Ala
 225 230 235 240
 Cys Ser Ser Gly Ala Lys Gly Pro Leu Ser Ser Ala Glu Leu Ser Glu
 245 250 255
 Asn Asn Phe Glu Ser Leu Phe Asp Phe Asp Gln Ser Leu Glu Ser Ser
 260 265 270
 Asn Ser Asp Gln Phe Ser Gln Ser Leu Ser Pro Glu Ala Thr Val Leu
 275 280 285
 Gln Asp Glu Ser Lys Pro Asp Ile Asn Ile Ala Ala Glu Ile Met Pro
 290 295 300
 Phe Ser Leu Leu Glu Lys Trp Leu Leu Asp Glu Ala Gly Cys Gln Glu
 305 310 315 320
 Lys Leu Val Gly Cys Cys Gly Asp Ala Lys Phe Phe
 325 330

<210> 55
 <211> 357
 <212> DNA
 <213> Triticum aestivum

<220>
 <221> unsure
 <222> (259)

<220>
 <221> unsure
 <222> (307)

<220>
 <221> unsure
 <222> (319)

<400> 55
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 ctctgtaatc tccatgcagg cctcaaccgc acaggaaaga gctgtcgcct ccggtggggtt 180
 aactacctcc accctgggccc taaagcgtgg gcgcatgact ccccatgaaa gaacgcctca 240
 tcctccaact ccatgctcng tggggaaaaca agtgggtccaa ggataacacg gaactgccaa 300
 ggcgtancga caatgaatna aagaactact gggagaacac atttgaggaa aaggaag 357

<210> 56
 <211> 54
 <212> PRT
 <213> Triticum aestivum

<220>
 <221> UNSURE
 <222> (21)

<220>
 <221> UNSURE
 <222> (27)..(28)

<220>
 <221> UNSURE
 <222> (41)

<400> 56
 Ala Gly Leu Asn Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Val Asn
 1 5 10 15
 Tyr Leu His Pro Xaa Leu Lys Arg Gly Arg Xaa Xaa Pro Met Lys Glu
 20 25 30
 Arg Leu Ile Leu Gln Leu His Ala Xaa Trp Gly Asn Lys Trp Ser Lys
 35 40 45
 Asp Asn Thr Glu Leu Pro
 50

<210> 57
 <211> 1072
 <212> DNA
 <213> Triticum aestivum

<400> 57
 gcacgaggcc aaagtatcag gtttgagggg tgggggatcc aaaaattagg tagctatatt 60
 gaagtatttt gcgcaaagtc gcaacaacaa atgtcacctt tgctaataac tttcttcttg 120
 cttcaacctc tgtaatctcc atgcaggcct caaccgcaca ggaaagagct gtögcctccg 180
 gtgggttaac tacctccacc ctggcctaaa gcgtgggögc atgactcccc atgaagaacg 240
 cctcatcctc gagctccatg ctögggtggg aaacagggtg tccaggatag cacggaagct 300
 gccaggöcgt accgacaatg agatcaagaa ctactggaga acacatatga ggaagaaaagc 360
 acaggagagg aagaggagcg tgtcacccctc accatcttca tcctcagtga cataccaatc 420
 cattcagcca cagacgöcat cgatcatggg aattggcöag caggaaöctc atgggtggcag 480
 tagctöcatc acaagcatat tgaaggöcac gcctgctgac atggatggat acctcatgga 540
 tcagatatgg atggagattg aggcaccctc tggggötaac tttcatgacg ggaaggataa 600
 ttcatacagc agccöctctg gccctctgct gccatcacöc atgtgggatt actacagccc 660
 tgaggcaggc tggaaöatgg atgagataaa gatggccöca caagttagct acagtaaagg 720
 aattggccöc agttattgaa gccatatata ttötatcaga ttactaagtt acttgcaacc 780
 tagcagaagt gaaatgcttt tgttgaaaaga accattagca tggatötaaa aaatatttat 840
 atctatctag cattccaagt gtöctcatgt tttatgtatc tactatötag catctagtgt 900
 gcaagacatg taatgcaagg acacttccac tttgtattca caataatcag ctatctcctg 960
 taagactttt ccaatgcaaa catgattagc aggtgtaata tcaacttaaa tgcttgccaa 1020
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa 1072

<210> 58
 <211> 198
 <212> PRT
 <213> Triticum aestivum

<400> 58
 Ala Gly Leu Asn Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Val Asn
 1 5 10 15

Tyr Leu His Pro Gly Leu Lys Arg Gly Arg Met Thr Pro His Glu Glu
 20 25 30
 Arg Leu Ile Leu Glu Leu His Ala Arg Trp Gly Asn Arg Trp Ser Arg
 35 40 45
 Ile Ala Arg Lys Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr
 50 55 60
 Trp Arg Thr His Met Arg Lys Lys Ala Gln Glu Arg Lys Arg Ser Val
 65 70 75 80
 Ser Pro Ser Pro Ser Ser Ser Ser Val Thr Tyr Gln Ser Ile Gln Pro
 85 90 95
 Gln Thr Pro Ser Ile Met Gly Ile Gly Glu Gln Glu Leu His Gly Gly
 100 105 110
 Ser Ser Cys Ile Thr Ser Ile Leu Lys Gly Thr Pro Ala Asp Met Asp
 115 120 125
 Gly Tyr Leu Met Asp Gln Ile Trp Met Glu Ile Glu Ala Pro Ser Gly
 130 135 140
 Val Asn Phe His Asp Gly Lys Asp Asn Ser Tyr Ser Ser Pro Ser Gly
 145 150 155 160
 Pro Leu Leu Pro Ser Pro Met Trp Asp Tyr Tyr Ser Pro Glu Ala Gly
 165 170 175
 Trp Lys Met Asp Glu Ile Lys Met Ala Pro Gln Val Ser Tyr Ser Lys
 180 185 190
 Gly Ile Gly Pro Ser Tyr
 195

<210> 59
 <211> 521
 <212> DNA
 <213> Triticum aestivum

<220>
 <221> unsure
 <222> (108)

<220>
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<400> 59
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 agggccgtgg acggtggacg aggaccttac gctgatcaac tacatcgcg accacggcga 180
 gggccgctgg aacgcgctgg cgcgggcccgc cggcctgagg cgcacgggga agagctgccg 240
 gctgcggtgg ctgaactacc tccgccccga cgtgaagcgc ggcaacttca ccgccgacga 300
 gcagctctc atcctcgacc tccactctcg ctggggcaac cgggtggtcga agatngcgca 360
 ncacctccc ggtcggacgg acaacgaaga tnaaagaact actgggagga ccanggtgca 420
 aaaagcacgc naancaactc aactgcnaac tccggnananc gcaaccttta aaggatgcca 480
 ataaggtacc tctggatgcc tcgcctctca acgcatcaac c 521

<210> 60
 <211> 131
 <212> PRT
 <213> Triticum aestivum

<220>
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 <222> (27)

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<220>
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<220>
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 <222> (129)

<400> 60
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 1 5 10 15

Pro Glu Glu Glu Ala Asp Arg Arg Arg Arg Xaa Glu Leu Arg Arg Gly
 20 25 30
 Pro Trp Thr Val Asp Glu Asp Leu Thr Leu Ile Asn Tyr Ile Ala Asp
 35 40 45
 His Gly Glu Gly Arg Trp Asn Ala Leu Ala Arg Ala Ala Gly Leu Arg
 50 55 60
 Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg Pro
 65 70 75 80
 Asp Val Lys Arg Gly Asn Phe Thr Ala Asp Glu Gln Leu Leu Ile Leu
 85 90 95
 Asp Leu His Ser Arg Trp Gly Asn Arg Trp Ser Lys Xaa Ala Xaa His
 100 105 110
 Leu Pro Gly Arg Thr Asp Asn Glu Asp Xaa Arg Thr Thr Gly Arg Thr
 115 120 125
 Xaa Val Gln
 130

<210> 61
 <211> 464
 <212> DNA
 <213> Triticum aestivum

<220>
 <221> unsure
 <222> (435)

<220>
 <221> unsure
 <222> (442)

<220>
 <221> unsure
 <222> (450)

<220>
 <221> unsure
 <222> (457)

<400> 61
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 ggcccctgga cgccggagga ggacctcgtg ctgcgtctcct acgtccagga gcacggcccc 120
 ggcaactggc gcgccgtccc caccaggacc ggctgatgc ggtgtagcaa gagctgccgg 180
 ctccggtgga ccaactacct gcgccaggg atcaagcgcg gcaacttcac cgaccaggag 240
 gagaagctca tcgtccacct ccaggcgctg ctcggaaca ggtgggcccgc gatcgccctc 300
 tacctccccg agcgcaccga caacgacatc aagaactact ggaacacgca actcaagcgc 360
 aagctgcaag cggggggcga cgccgcgggc aaaccggcgg cgcaaaggct gctcctcctc 420
 aaagggcaat ggganaggcg gngcagacgn catcaanatg cgcc 464

<210> 62
 <211> 122
 <212> PRT
 <213> Triticum aestivum

<400> 62

Met Gly Arg Pro Pro Cys Cys Asp Lys Glu Gly Val Lys Lys Gly Pro
1 5 10 15

Trp Thr Pro Glu Glu Asp Leu Val Leu Val Ser Tyr Val Gln Glu His
20 25 30

Gly Pro Gly Asn Trp Arg Ala Val Pro Thr Arg Thr Gly Leu Met Arg
35 40 45

Cys Ser Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Gly
50 55 60

Ile Lys Arg Gly Asn Phe Thr Asp Gln Glu Glu Lys Leu Ile Val His
65 70 75 80

Leu Gln Ala Leu Leu Gly Asn Arg Trp Ala Ala Ile Ala Ser Tyr Leu
85 90 95

Pro Glu Arg Thr Asp Asn Asp Ile Lys Asn Tyr Trp Asn Thr Gln Leu
100 105 110

Lys Arg Lys Leu Gln Ala Gly Gly Asp Ala
115 120

<210> 63

<211> 217

<212> PRT

<213> Pisum sativum

<400> 63

Met Asp Lys Lys Pro Cys Asn Ser Ser Gln Asp Pro Glu Val Arg Lys
1 5 10 15

Gly Pro Trp Thr Met Glu Glu Asp Leu Ile Leu Ile Asn Tyr Ile Ala
20 25 30

Asn His Gly Glu Gly Val Trp Asn Ser Leu Ala Lys Ala Ala Gly Leu
35 40 45

Lys Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg
50 55 60

Pro Asp Val Arg Arg Gly Asn Ile Thr Pro Glu Glu Gln Leu Leu Ile
65 70 75 80

Met Glu Leu His Ser Lys Trp Gly Asn Arg Trp Ser Lys Ile Ala Lys
85 90 95

His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Phe Trp Arg Thr
100 105 110

Arg Ile Gln Lys His Ile Lys Gln Val Asp Asn Pro Asn Gln Gln Asn
115 120 125

Phe Gln Gln Lys Met Ser Leu Glu Ile Asn Asp His His His His His
130 135 140

Pro	His	Gln	Pro	Ser	Ser	Ser	Gln	Val	Ser	Asn	Leu	Val	Glu	Pro	Met	
145					150					155					160	
Glu	Thr	Tyr	Ser	Pro	Thr	Ser	Tyr	Gln	Gly	Thr	Leu	Glu	Pro	Phe	Pro	
				165					170					175		
Thr	Gln	Phe	Pro	Thr	Ile	Asn	Asn	Asp	His	His	Gln	Asn	Ser	Asn	Cys	
			180					185					190			
Cys	Ala	Asn	Asp	Asn	Asn	Asn	Asn	Asn	Tyr	Trp	Ser	Met	Glu	Asp	Ile	
	195						200					205				
Trp	Ser	Met	Gln	Leu	Leu	Asn	Gly	Asp								
210						215										